WHAT ARE WE GETTING INTO?

Distributed Centers and the DoD High Performance Computing Modernization Program (HPCMP) form a partnership that involves much more than the transfer of funds to acquire high performance computing systems and peripherals. Being selected and accepting selection as one of the program's distributed centers entails agreeing to the partnership and its stipulations. There are several key documents that define that partnership – the "winning" proposal package along with its supporting documents and "after selection" documents and the terms of reference which principals from the selected site and the Director of the HPCMP sign.

The partnership places obligations upon the centers selected but those centers also enjoy substantial benefits as shared resource centers of the HPCMP.

This paper does not discuss the benefits for they are fairly specific to each site and how they take advantage of what the program offers. The current distributed centers are listed on the program's WWW page and you are most welcome to contact any of the centers to discuss advantages of distributed center status.

What this paper does discuss are the requirements of winning distributed centers.

Please note: It is very important that you staff your center with qualified and motivated personnel and develop a team to assist you in initial implementation and running the center.

REQUIREMENTS

1. **Proposal Package**: In addition to the description of what you intend to accomplish and what percentage of HPCMP-funded systems' cycles you will make available to off site DoD users, you will be held to either your proposed performance metrics (without negotiated modification) or to a negotiated set to which you and the HPCMP agree. Note that you must obtain appropriate Defense Research and Engineering Network (DREN) connectivity to provide off-site users with cycles; hence your progress in receiving an Authority to Connect to DREN will be closely monitored.
2. **Follow-on Documents:** There are several documents you will need to prepare and submit after you are selected to become an HPCMP distributed center. There are suspense dates associated with each document at paragraph 6 of the call for proposals. A brief explanation of each document and a sample shot of each follow.

a. Signed Terms of Reference (1QFY2002)

Terms of reference are the means used by the HPCMP to effect the transfer of funds to the sites selected for funding. The program office also uses the document to delineate important requirements with which site signatories and their designated points of contact must comply. The TOR is an officially binding agreement between the "performing organization" (the funded site) and the HPCMP. The program office management and staff review the TOR boilerplate stipulations each year before the boilerplate is finalized. Such reviews ensure that standard stipulations are current and have been adjusted, as necessary, to take advantage of any lessons learned since last published. Here are some views of the draft TOR boilerplate used for the sites funded in FY 2000. Note the recurring reports required on page four of the TOR

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DATE: _____

HIGH PERFORMANCE COMPUTING (HPC) MODERNIZATION PROGRAM
TERMS OF REFERENCE (TOR)

PROJECT TITLE: Army, Navy, Air Force Everything Site (ANAFES) Distributed Center

PERFORMING ORGANIZATION: Commander, ANAFES
1 Hard Work Circle
Automated, DE #####-####

DESCRIPTION OF EFFORT: The Army, Navy, Air Force Everything Site will establish the ANAFES Distributed Center (DC) in accordance with its "Proposal for Army, Navy Air Force Everything Site," dated September 1999.

The High Performance Computing Modernization Program (HPCMP), as agent of the Deputy Under Secretary of Defense (Science & Technology) (DUSD[S&T]), will exercise oversight of the HPCMP distributed center located at ANAFES.

This oversight includes, but is not limited to: review of the distributed center's operating and testing policies and procedures as pertains to High Performance Computing (HPC) Modernization Office (HPCMO) - funded resources; guidance in determining support software to be provided; encouragement of the distributed center's interaction with the HPCMP user community; resource disposition; and periodic evaluations of the distributed center's activities as pertains to HPCMO-funded resources. This effort will provide support for the acquisition of HPCMP approved DC upgrades for DOD-wide use in FY 2000 and beyond. The Deputy Under Secretary of Defense (Science and Technology) [DUSD (S&T)] shall determine the ultimate use and disposition of these resources.

ANAFES agrees to be responsive to the HPCMO's oversight requirements and agrees to provide a minimum of ## percent of the HPCMP resources to support non-local requirements of the HPCMP community.

By 30 April 2000, ANAFES will establish a World Wide Web presence, accessible by the general public, which will provide information about the distributed center in accordance with guidance that will be furnished by the HPCMO under separate cover.

SCHEDULE: See Period of Performance.

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JUSTIFICATION/AUTHORIZATION: The DUSD(S&T) issued an Acquisition Decision dated XXXXXXX which authorized the allocation of procurement funds for FY 2000 distributed centers investments. This constitutes Information Resource Management (IRM) approval for the execution of this agreement.

PERIOD OF PERFORMANCE: From release of funds through 30 September 2003 unless otherwise determined by the Director, HPCMP. The normal period of performance for a distributed center is three full fiscal years after the system procured with HPCMP-provided funds is deployed. HPCMP requirements as determined by the Director may, in rare instances, dictate an extension to the normal period of performance. Otherwise, distributed centers may request to implement the HPCMP Distributed Centers Transition Policy to no longer be categorized as a DC.

FUNDING: The HPCMP will provide funding in the amount of $ #,###,### of FY 2000 procurement funds.

ANAFES shall provide the HPCMO Technical Point of Contact with a detailed listing of items proposed for purchase and their Procurement and Initial Implementation Plan (PIIP) and receive approval from the HPCMO for the proposed buy prior to entering into a contractual agreement for the items. Furthermore, ANAFES shall procure the items using HPCMO Blanket Purchase Agreements (BPAs) or using other vehicles. In the latter case, the cost of the items shall not exceed those of the HPCMO BPA without prior written approval of the HPCMP Acquisition Manager. ANAFES will obligate these funds in accordance with the FY 2000 Defense Appropriations Act and applicable DOD financial and contractual regulations. As obligating, modifying, and deobligating documents are issued, ANAFES will provide copies of these documents to the HPCMO Financial Point of Contact.

The HPCMO expects ANAFES to obligate these funds no later than 31 July 2000. Should funding not get obligated prior to 31 August 2000, the HPCMO reserves the right to re-allocate these funds for other HPCMP requirements.

The FY 2000 procurement funding provided by the HPCMO is intended for system acquisition. Maintenance costs may be included only where such service is part of the standard and routine warranty for the system. No additional HPCMP funding for sustainment (i.e., operations and maintenance) will be provided. The ANAFES will fund sustainment costs directly.

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ASSET ACCEPTANCE, ACCOUNTABILITY AND DISPOSITION:

All systems procured with these funds will be Year 2000 (Y2K) compliant at time of acceptance.

ANAFES will, in accordance with DODD 5000.2, plan, conduct, and document required testing for all assets procured with HPCMP funding and provide the HPCMO copies of the test plan documents 30 days prior to expected testing for review, coordination and approval. The HPCMO reserves the right to observe the site's conduct of required testing.

ANAFES will assume accountability and responsibility for the assets in accordance with applicable DOD and subordinate implementing regulations and instructions. Once the transition plan for the center is implemented, the Director, HPCMP reserves the option to redistribute the HPCMP-funded assets to other sites. If the Director, HPCMP, determines redistribution within the HPCMP is not feasible, the ANAFES Technical Point of Contact shall then report the assets excess in accordance with appropriate Service/Agency directives.

PRINCIPAL POINTS OF CONTACT (POCs) FOR THE ARMY, NAVY, AIR FORCE EVERYTHING SITE (ANAFES)

Technical POC
Name:
Title:
Full Address:
Phone:
FAX:
Email:

PRINCIPAL POINTS OF CONTACT

Technical POC
Valerie B. Thomas
Distributed Centers Action Officer
HPC Modernization Office
1010 N. Glebe Rd, Suite 510
Arlington, VA, 22201
Phone: 703-812-8205
Fax: 703-812-9701
Email: vthomas@hpcmo.hpc.mil

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4. In order to support DOD-level oversight documentation requirements, the performing organization may be requested to participate in HPCMO-sponsored Integrated Product Teams (IPTs).

APPROVING OFFICIALS

O

Date

ization Program
e Rd, Suite 510
22201-4795
812-8205
2-9701
@hpcmo.hpc.mil

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REPORTING REQUIREMENTS:

1. Financial:
   a. Two financial reports shall be provided to the HPCM Program Office. The first entitled "Projected Obligations and Expenditures" is due within 30 days of receipt of funding and not later than 30 days after the beginning of each subsequent federal fiscal year thereafter, until all funds are expended. The second entitled "Current Obligations and Expenditures" is due the 15th of the month following the month in which funding is received and not later than the 15th of each month thereafter, until all funds are expended.
   b. Copies of financial obligating documents shall be provided to the HPCMO by the 15th of each month for all obligations issued for the previous month.
2. Management:
   a. Provide annually, at the close of each fiscal year, a memorandum of support from the commander of the site's host or parent organization. The memorandum shall state explicitly that the parent site or organization commits to providing operations and sustainment funding and other necessary support for the center.
   b. Utilization: Monthly utilization reports are expected in accordance with HPCMO guidelines at URL www.hpcmo.hpc.mil/Htocs/HPCMETRIC/index.html.
   c. Quarterly Reporting: Quarterly status reports, which indicate the execution status of the proposal, are due no later than **ten** calendar days after the end of each quarter of the federal fiscal year. The report especially highlights any difficulties or delays already encountered or anticipated, and whether changes in cost, schedule or performance have occurred or are anticipated. The complete report format will be provided by the HPCMO under separate cover.
   d. Systems Acquisition Oversight: Site specific distributed center information regarding: (1) life cycle cost estimate (LCCE) (updated and submitted annually by 1 December of each year), (2) approved site security plan and or a site addendum to the HPCMP Security Plan, (3) a site addendum to the HPCMP Test and Evaluation Master Plan (TEMP) are expected from ANAFES in accordance with guidance provided by HPCMO. ANAFES may also be expected to provide other documentation or reports to satisfy DOD oversight requirements.
   e. The ANAFES Technical Point of Contact will develop a Procurement and Initial Implementation Plan (PIIP) which provides a schedule for the execution of the center's acquisition for review and approval by the Director, HPCMP. The PIIP should be submitted via E-mail not later than 28 January 2000. Once agreed to by the Director, HPCMP, the PIIP and approved performance metrics document become the baseline for subsequent progress and performance reviews.
3. Other special reports or more frequent reports may be requested by the HPCMO as needed.

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b. **Procurement and Initial Implementation Plan (PIIP) (1QFY2002)** The PIIP provides the HPCMP with essential information concerning what is being procured and what acquisition vehicle(s) will be used. The plan will give the program office a schedule of key events for system testing and availability and will provide an overview of site goals concerning the use of the system. All distributed centers will actually keep the program office current on the completion of milestone schedule events in their quarterly reports. The PIIP's key events and the sites' completion of the events are part of an evaluation and assessment process we will discuss later. The format of the PIIP is displayed below. An MS Word version of the document is in a format file linked from the HPCMP WWW page.

PROCUREMENT AND INITIAL IMPLEMENTATION PLAN (PIIP) FORMAT

The PIIP will provide the High Performance Computing Modernization Office (HPCMO) with essential information concerning what is being procured and what acquisition vehicle(s) will be used. The plan will give the HPCMO a schedule of key events for system testing and availability and will provide an overview of site goals concerning the use of the system.

Procurement and Initial Implementation Plan
(Site Name)
FY (XXXX)

(date)

A. Points of Contact:

	Technical	Procurement
Name		
Position		
Postal Address		
Voice		
FAX		
E-mail		

B. Acquisition:

1. **Description:** Provide a brief description of the system(s) you will procure. Include in this section the number of processors, the total amount of memory in gigabytes, the total amount of disk storage, and the cumulative sustained and peak gigaflop rating. Identify any specialized equipment or embedded items. If the system actually being acquired differs from that described in your FY 2000 proposal, briefly describe the differences and give a reason for them.

2. **Strategy:**

(a) Vehicle: Describe the method of acquisition being used including the contract vehicle and type. If you intend to use a General Services Administration (GSA) Federal Supply Schedule (FSS) contract, or other Government Wide Agency Contract (GWAC), multi-agency or agency indefinite delivery/indefinite quantity (ID/IQ) contract, state the contract name, number, and contract line numbers (CLIN) you will be ordering. *Note that you must receive prior approval from the HPCMP Acquisition Manager if you do not intend to use the HPCMP Blanket Purchase Agreements (BPAs).* Provide an extract of the CLIN description(s) and pricing for each acquisition vehicle you intend to use.

(b) Schedule: Provide a procurement schedule to include the items shown below. *(If you will use multiple contracts, plan ... amount of funding obligated for each contract ...)*

	Planned	Actual
Date of Award		
Date Funding Fully Obligated		
Delivery Date		
Installation Completed		
Start of Acceptance Testing		
Testing Complete		
First User System Access		
DREN/SDREN Connectivity		
General User Availability		

(c) ... Pertinent Information: Provide information concerning any special requirements ... arrangements or considerations of this acquisition ...

C. Implementation Plan: Provide a summary of the site proposal's description of the critical technology need and then describe the plan and schedule for the two years following installation of how the site intends to employ the HPC assets to address this need.

1. **First Year Goals:**

2. **Second Year Goals:**

c. Buy List (1QFY2002) The "buy list" is simply a detailed listing of the items you will procure. You might consider it a parts list with prices. It provides sufficient detail for the program office to know the capabilities of the system and peripherals and would include such detail as number and types of processors, the operating system and version, and the like.

Part Number	Qty.	Description	Price w/IFF	Bundled Price w/IFF
SF-HPCBPA-001	**1**	**Medium Supercomputer**		**$#,###,###**
E10000-D	1	Starfire Power Express System	$###,###	
2861A	8	Power Express board for E10K. Includes one system board (2761A), 4 UltraSPARC Modules 400MHz-8-Mbyte (2580A), 2GB Memory (7023A) Memory Board (7025A), 1 dual SBus I/O board (2730A)	$###,###	
2722A	2	Enterprise 10000 Control Board including Ethernet cable and rack mounted Ethernet Hub. Supports 5 to 1 and 4 to 1 modes on E10000	$##,###	
2754A	1	E10000 System Service Processor, (SSP). Ultra 5 workstation with one 360MHz CPU module, 128-Mbyte memory, 8.4-Gbyte internal disk, 32X CD-ROM, QFE PCI Card (1034A), and 19" color monitor	$#,###	
SG-XARY147A-36G	2	Configurable w/ servers in factory: 36-Gbyte (4 x 9.1-Gbyte 10K RPM disks) Sun StorEdge D1000 for rack mounting in the StorEdge or Enterprise Expansion Racks w/1 Interface Card, 2 Power supplies, 2 fan trays (4fans), 4 Differential UltraSCSI to host ports	$##,###	
1049A	2	Quad FastEthernet 2.0 SBus Card (QFE) supports Sun Trunking 1.0 software	$#,###	
1065A	2	SBus Ultra Differential F/W Intelligent SCSI Host Adapter.	$###	
SOLMS-070W9999	1	Solaris 7 Standard, Latest Release English Server Media Kit	$##	
SOLMS-260W9999	1	Solaris 2.6 5/98 English Server Media Kit	$##	
SF-HPCBPA-002	**1**	**Small Supercomputer**		**$###,###**
E10000-D	1	Starfire Power Express System	$###,###	
2861A	5	Power Express board for E10K. Includes one system board (2761A), 4 UltraSPARC Modules 400MHz-8-Mbyte (2580A), 2GB Memory (7023A) Memory Board (7025A), 1 dual SBus I/O board (2730A)	$###,###	
2722A	2	Enterprise 10000 Control Board including Ethernet cable and rack mounted Ethernet Hub. Supports 5 to 1 and 4 to 1 modes on E10000	$##,###	

d. **Life Cycle Cost Estimate (LCCE) (1QFY2002)** This document is used as input to develop the general life cycle cost estimate for the HPCMP. Although the program provides only one time investment funding for the distributed centers, we still ask that you provide full LCCE, both investment and sustainment costs, for the distributed center. Your initial estimate should include the year of funding, FY 2002, and two additional years, FY 2003 and FY 2004. *You will be required to update this estimate once a year by the first of December.*

Life Cycle Cost Estimate{tc "Life Cycle Cost Estimate"}
(Site Name)
FY (XXXX)

(date)

A. Assumptions and Cost-estimating Relationships and Rationale (used to develop the LCCE costs presented)

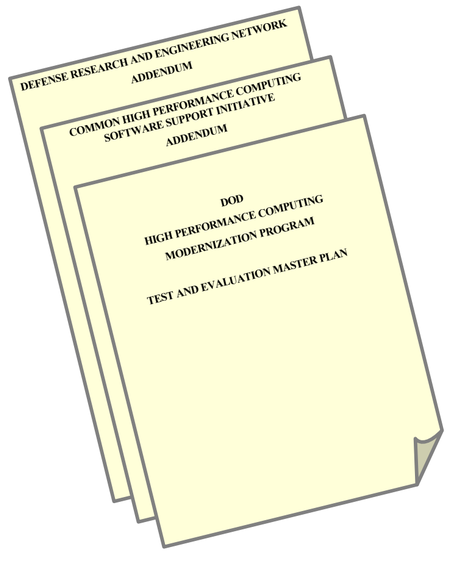
B. Life Cycle Costs ($M)

Category		FY 2002 Funds				FY 2003 Funds				FY 2004 Funds			
		Procurement		RDT&E, O&M, or Other		Procurement		RDT&E, O&M, or Other		Procurement		RDT&E, O&M, or Other	
		HPCMO	Site	HPCMO	Site	HPCMO	Site	HPCMO	Site	HPCMO	Site	HPCMO	Site
Investment (Purchase)													
	Hardware												
	Software												
	Other												
Travel													
Supplies													
Maintenance													
	Hardware												
	Software												
	Other												
Government Personnel													
Contractor Personnel													
Utility requirements													
Facilities Lease & Maintenance													
Communications													
Training													
Other (specify)													
TOTAL													

Personnel
Number of Full-Time Equivalents (FTEs)

FY 2002	FY 2003	FY 2004

e. **"TEMP" Addendum (2QFY2002)** This is your site's plan to test and evaluate the system(s) you procure with HPCMP funds. The Test and Evaluation Master Plan (TEMP), developed by the program office and approved by the Director, Operational Test and Evaluation, is a capstone plan for the various facets of the HPCMP. The capstone TEMP is supplemented by addenda which detail how we will test and evaluate the smaller facets of the program. Your site's TEMP addendum will be reviewed by the HPCMO management and staff. Your system tests will be witnessed by HPCMO management and staff.



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f. Security Plan Addendum (2QFY2002) You will be responsible for developing an addendum to the HPCMP security plan that will *detail* responsibilities and procedures to ensure systems security. Called the System Security Authorization Agreement (SSAA), it is the document format specified at enclosure 6 of DoD Instruction 5200.40, "DOD Information Technology Security Certification and Accreditation Process (DITSCAP)". The format has been adopted DoD-wide and most services are requiring that documentation be converted to this format. While it is *not yet mandatory* within our program, it is recommended and will most likely be mandated in the future. The program office will provide sites a sample completed plan; here is the outline specified in the DoD instruction.

1. **Mission Description and System Identification**
   - **1.1.** System name and identification.
   - **1.2.** System description.
   - **1.3.** Functional description.
     - **1.3.1**. System capabilities.
     - **1.3.2**. System criticality.
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